



# Interpreting Waterwatch Water Quality Data

Water is a very valuable resource, but how do we know how good the water we are drinking or swimming in is? There are a number of simple tests which can be carried out on a sample of water to determine how healthy it is. The following information discusses each test and shows you how to interpret the results.

## Conductivity

The natural conductivity of fresh water can vary from very low values (30uS/cm) to very high (2000uS/cm). Conductivity is a measure of the total dissolved solids in particular sodium chloride (salt) in the water.

- 0 – 800 good drinking water
- 800 – 2500 can drink but can taste the salt. Some plants can not be watered with water over 1500.
- 2500 – 10000 not suitable for people, crops, stock or irrigation

## Temperature

Effects the distribution and abundance of aquatic plants and animals, and the rate of photosynthesis by plants. Changes in temp will alter the amount of dissolved oxygen. Warmer water has less DO than cooler waters. Temperature above 18 degrees starts to stress macroinvertebrates and fish in the water.

## Turbidity

Turbidity is the cloudiness of the water resulting from suspended materials. This material decreases the ability of sunlight penetration into the stream and therefore plant growth is decreased. It is a good indicator of erosion because as more soil enters the system, turbidity increases. Turbidity is measured in Nephelometric Turbidity Units (NTU)

- 0 – 15 Excellent
- 15-17.5 Good
- 17.5 – 20 Fair
- 20 – 30 Poor
- 30 – 400 Degraded

## Phosphate

It is essential for all forms of life. When concentration become too high, problems such as algal blooms, excessive growth of aquatic weeds and the loss of species diversity occur.

- <0.01 mg/l Excellent
- <0.025 mg/l Good
- <0.05 mg/l Fair
- <0.1 mg/l Poor
- >0.1 mg/l Degraded

## Dissolved Oxygen

Measures the amount of dissolved oxygen in the water. Levels are affected by temperature and light. Do levels in good fishing waters generally averages about 9mg/l. Levels below 3 mg/l will see hardy fish die.

## pH

Measures how acidic or alkaline the water is on a scale of 0 to 14. High or low readings will cause death of all aquatic life. A healthy pH range for fresh water is between 6.5 to 8.2.